ABSTRACT

A system and method is provided for using a first vascular image, or more particularly a plurality of control points located thereon, to identify a border on a second vascular image. Embodiments of the present invention operate in accordance with an intra-vascular ultrasound (IVUS) device and a computing device electrically connected thereto. Specifically, in one embodiment of the present invention, an IVUS console is electrically connected to a computing device and adapted to acquire IVUS data. The IVUS data (or multiple sets thereof) is then provided to (or acquired by) the computing device. In one embodiment of the present invention, the computing device includes a plurality of applications operating thereon -- i.e., a border-detection application, an extrapolation application, and an active-contour application. These applications are used to (i) identify a border and control points on a first IVUS image (i.e., any IVUS image), (ii) extrapolate the control points to a second IVUS image (i.e., another IVUS image), (iii) identify a border on the second IVUS image, and (iv) adjust the border on the second IVUS image in accordance with at least one factor. In one embodiment of the present invention, the at least one factor is selected from a group consisting of gradient factor, continuity factor, and curvature factor.